

REMARKS

Claims 1-6 are pending in this application. Claim 5 stands allowed. By this Amendment, claim 6 is added. No new matter is added.

I. Allowed/Allowable Subject Matter

The allowance of claim 5, as well as the indication of allowable subject matter in claims 2-4, is appreciated, the allowable claims being in condition for allowance if rewritten in independent form to include all of the features of their base claim and any intervening claims. Claims 2-4, as well as the remaining pending claims, are in condition for allowance for the reasons discussed below.

II. Claim Rejections Under 35 U.S.C. §103

Claim 1 is rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent 6,362,627 to Shimamoto et al. ("Shimamoto") in view of U.S. Patent 6,020,717 to Kadouchi et al. ("Kadouchi"). The rejection is respectfully traversed.

Neither Shimamoto or Kadouchi, whether considered alone or in combination, disclose or suggest each and every feature recited in the rejected claim. For example, the combination of references fails to disclose or suggest a voltage detecting apparatus for a combination battery, comprising a multiplexer type flying capacitor voltage detecting circuit having an input multiplexer and an output side sampling switch, whose operation timing is controlled in response to an entered switching control signal for time sequentially executing voltage read-in processing and voltage read-out processing to detect the voltage of a plurality of battery modules of a combination battery in a time sequential fashion; a synchronous control type A/D converter whose operation timing is controlled in response to an entered activation signal for sample holding and A/D converting an analog output voltage of said flying capacitor voltage detecting circuit, and holding a digital voltage signal as a resulting output until a succeeding digital voltage signal is obtained; and a battery controller whose

operation timing is controlled in response to an entered transfer command signal for reading said digital voltage signal produced from said A/D converter and storing the readout digital voltage signal into a data storage area assigned to each of said battery modules, wherein said battery controller comprises a timing table on which generation timings of said switching control signal, said activation signal, and said transfer command signal are all determined on a common time axis, and timing control for said flying capacitor voltage detecting circuit, said A/D converter, and said battery controller is carried out by outputting said switching control signal, said activation signal, and said transfer command signal to said flying capacitor voltage detecting circuit, said A/D converter, and said battery controller at the timing regulated in said timing table and according to an order memorized in said timing table.

Shimamoto relates to an isolation-type voltage measuring apparatus for measuring a voltage from an electrical apparatus under conditions electrically isolated from the electrical apparatus to be measured. The apparatus includes a flying capacitor method having a capacitor in the switch (col. 1, lines 12-17). The voltage measuring apparatus includes a voltage source 10, a first group of switching devices 20, a switch 9a, a capacitor 7, a second switching device 4 and a buffer circuit 5. The switch 9a, switches 4a and 4b of the switching device 4 and switches 21a-23b of the switching device 20 turn in time synchronization with each other to reduce a common mode error that is caused by leakage currents Ia and Ib that occurs due to the capacitants in an off-state of the first group of switching devices 20 (col. 9, lines 35-54; Fig. 4). However, Shimamoto fails to disclose or suggest a battery controller that includes a timing table on which generation timings of the switching control signal, the activation signal and the transfer command signal are all determined on a common time axis.

It is alleged in the Office Action that such a battery controller is shown at Fig. 5 of Shimamoto. However, Fig. 5 discloses no such battery controller. Rather, Fig. 5 of

Shimamoto is a timing chart showing a timing of switching operations for the respective switches (21a, 21b, 22c, 22d, 23a, 23b, . . .) in the voltage measuring apparatus shown in Fig. 4. There is no description of any such battery controller that regulates timing of such signals according to an order stored in the timing table.

Moreover, when relying on the figures of a reference as disclosing a feature recited in a rejected claim, the figure must show the claim structure and how the features of the claim is put together (see MPEP §2124.04/2125). Because the figures of Shimamoto fail to disclose the battery controller that is recited in the rejected claims, (i.e., having the timing table) and because the related description in Shimamoto fails to disclose or suggest any such battery controller and timing table, Shimamoto fails to disclose the features of the rejected claim as alleged in the Office Action.

Additionally, the Office Action does not allege, nor does Kadouchi disclose, any such battery controller having a timing table. Therefore, the combination of references fails to render obvious the subject matter of claim 1. Therefore, withdrawal of the rejection of claim 1 under 35 U.S.C. §103(a) is respectfully requested.

III. New Claim

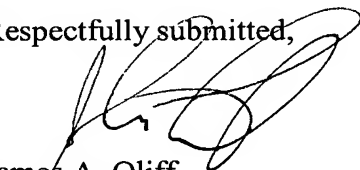
The combination of references fails to disclose or suggest the additional features recited in claim 6. Moreover, claim 6 is allowable for at least its dependency on claim 1 for the reasons discussed above.

IV. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-6 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

John W. Fitzpatrick
Registration No. 41,018

JAO:JWF/ldg

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OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

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